

## Monroe County, FL Nontechnical Soil Descriptions



Nontechnical soil descriptions describe soil properties or management considerations specific to a soil map unit or group of map units. These descriptions are written in terminology that nontechnical users of soil survey information can understand and are used to create reports. By linking the description to the soil survey map units these reports can be generated by conservation planners and other NRCS employees for distribution to land users. These descriptions are available through both TOOLKIT and NASIS.

In this subsection nontechnical descriptions are available through four categories they are Agronomic, Ecological Community, Urban, and Water Quality. Separate map unit to description links are provided for each category.

### **AGRONOMIC**

The following agronomic categories are available and linked through the Land Capability Unit (LCU) that are listed below.

#### Category

aSOI - Soil Characteristics  
bSAC - Soil Agronomic Characteristics  
cH2O - Seasonal High Water Table  
dCUL - Cultivation Limitations  
eERO - Erosion Control  
fIRR - Irrigation Needs  
hPAS - Pasture and Hayland  
iWMG - Water Table Management

<u>Map Symbol</u>	<u>Non hydric LCU</u>	<u>Hydric LCU</u>	<u>Drained LCU</u>	<u>Undrained LCU</u>
2	7s7			
3	7s7			
4	8s1(Rock outcrop)			
		8w2(Tavernier)		
5		8w2		
6		8w2		
7	8s1			
8	8s1(Rock outcrop)			
		8w2(Cudjoe)		

<u>Map Symbol</u>	<u>Non hydric LCU</u>	<u>Hydric LCU</u>	<u>Drained LCU</u>	<u>Undrained LCU</u>
9		7w4		
11	8s1			
12	8s1			
		8w2(Cudjoe)		
13	7s7			
15		8w2		
16	6s6			
17		7w4		
18		8w1		
19	7w4			

## **ECOLOGICAL COMMUNITY**

The following categories are available below.

kRNG - Rangeland  
 IWLD - Wildlife Suitability  
 mWOD - Woodland Suitability

EC 2 (South Florida Coastal Strand) – Map Unit 16

EC 9 (Everglades Flatwoods) – Map Unit 13

EC 14 (Tropical Hammocks) – Map Units 2, 3, 12\*, 19

EC 19 (Mangrove Swamps) – Map Units 4, 5, 6, 8, 9, 15, 17

EC 24 (Sawgrass Marsh) – Map Unit 12\*

\* - These Map Units have more than one type of Ecological Community.

Map Units without an Ecological Community listed are not suited to these uses or suitability is so variable that it must be determined on-site.

## **URBAN USES**

The following additional nontechnical descriptions are available for urban interpretations:

oURB - Urban Use Statement  
pSEP – Septic Tank Absorption  
qLRS – Local Roads and Streets

2 – Map Unit 16  
05 - Map Units 2, 3  
15 - 7  
19 - Map Units 4, 5, 6, 8, 9, 12, 13, 15, 17, 18, 19  
20 - 11

Map units without a link listed are either not suited to these uses or suitability is so variable that it must be determined on-site.

## **WATER QUALITY**

The last group of nontechnical description in this subsection of this FOTG is that group dealing with water quality, specifically pesticide and nutrient management. The link between the statements and the map units is listed below.

sWQ – Water Quality Statement  
tPES – Pesticide Management Statement  
uNUT – Nutrient Management Statement

03 - Map Units - Map Units – 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19

## **Nontechnical Soil Descriptions**

### **6s6 Map Unit 16**

"aSOI", "6s6", "This map unit consists of well to excessively drained, nearly level to sloping soils on ridges along the coast and inland. They have sandy layers to depths of more than 80 inches."

"bSAC", "6s6", "The soils have a loose, well aerated root zone to depths of more than 80 inches. The available water capacity averages very low in the root zone. Natural fertility is very low and nutrients are rapidly leached from the soil. Rainfall is rapidly absorbed on protected areas, and there is little runoff. Erosion is not a serious hazard."

"cH20", "6s6", "In normal years these soils do not have a seasonal high water table within a depth of 72 inches."

"dCUL", "6s6", "Due to the very low natural fertility, droughtiness, and the rapid leaching of plant nutrients, these soils are not suited to cultivated field crops."

"eERO", "6s6", "If these soils are cultivated, erosion control measures that would adequately protect the soil and water resource base are difficult to install and/or maintain."

"fIRR", "6s6", "Irrigation of high value crops is usually feasible where irrigation water is readily available. The rate of water application should be low enough to prevent runoff and erosion. A well designed irrigation system to maintain optimum moisture conditions is needed to assure acceptable citrus yields."

"hPAS", "6s6", "These soils have only fair suitability for pastures. Grasses such as hybrid bermudagrass and bahiagrass make only fair growth where an intensive nutrient management system is maintained. Clovers are not adapted."

"iWMG", "6s6", "Water table management is not normally practiced on these soils."

### **7s7 Map Units 2, 3, 13**

"aSOI", "7s7", "This map unit consists of nearly level soils on uplands near the coast. They are shallow to very shallow to limestone bedrock."

"bSAC", "7s7", "These soils have a shallow root zone. The available water capacity is very low. Natural fertility is very low and response to fertilizers is very low. Rainfall is rapidly absorbed but moves rapidly through the soil and very little is retained."

"cH20", "7s7", "In normal years these soils have a seasonal high water table at a depth of 30 to 40 inches for 1 to 4 months or less. In other months the water table is below a depth of 40 inches."

"dCUL", "7s7", "These soils are too steep and erodible to be suited to cultivated crops."

"eERO", "7s7", "Due to the lack of these soils being cultivated, erosion control is not normally a management concern."

"fIRR", "7s7", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "7s7", "Due to extreme droughtiness, these soils are not suited to hay and pasture."

"iWMG", "7s7", "Water table management is not a normal practice on these soils because of the lack of cultivation and an available water source."

#### **7w4 Map Units 9, 17, 19**

"aSOI", "7w4", "This map unit consists of level soils that are frequently flooded by tides."

"bSAC", "7w4", "These soils have a root zone that is limited by water that covers the surface during much of the year under natural conditions. They have moderate natural fertility, but wetness and flooding makes them unsuited to cultivated crops."

"cH20", "7w4", "In normal years these soils have a seasonal high water table within 6 inches of the surface for 2 to 6 months of most years. During other months the water table is deeper. These soils are also subject to frequent flooding. Only rarely is the water table below the surface for an extended period."

"dCUL", "7w4", "Due to extreme wetness and salinity, these soils are not suited to cultivated crops."

"eERO", "7w4", "Due to the lack of these soils being cultivated, erosion control is not a management concern."

"fIRR", "7w4", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "7w4", "If water control measures are established, these soil would be moderately well suited to improved pastures. Due to the difficulty of installing these measures and the lack of outlets in most areas, they have seldom, if ever, been used for pasture."

"iWMG", "7w4", "Water table management is not a normal practice on these soils because of the lack of cultivation."

### **8s1 Map Units 4, 7, 8, 11, 12**

"aSOI", "8s1", "This map unit consists of miscellaneous areas where no soil exists and has no value for agricultural uses."

"bSAC", "8s1", "Due to an impervious surface these areas are not vegetated."

"cH20", "8s1", "These soils have a highly variable water table."

"dCUL", "8s1", "Due to the impervious surface, these soils are not suited to cultivated crops."

"eERO", "8s1", "Due to the lack of these soils being cultivated, erosion control is not a management concern."

"fIRR", "8s1", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "8s1", "Due to the impervious surface, actions, these soils are not suited to hay and pasture."

"iWMG", "8s1", "Water table management is not a normal practice on these soils because of the lack of cultivation."

### **8w1 Map Unit 18**

"aSOI", "8w1", "This map unit consists of narrow strips of land between water and the inland. These strips of land consist of quartz sand and shell fragments that are constantly shifted by wave action."

"bSAC", "8w1", "Beaches are not vegetated due to tidal and wave actions."

"cH20", "8w1", "In normal years these soils have a seasonal high water table at the surface throughout the year. These soils are also subject to daily tidal flooding. Only rarely is the water table below the surface for an extended period."

"dCUL", "8w1", "Due to tidal and wave actions, these soils are not suited to cultivated crops."

"eERO", "8w1", "Due to the lack of these soils being cultivated, erosion control is not a management concern."

"fIRR", "8w1", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "8w1", "Due to tidal and wave actions, these soils are not suited to hay and pasture."

"iWMG", "8w1", "Water table management is not a normal practice on these soils because of the lack of cultivation."

#### **8w2 Map Units 4, 5, 6, 8(Cudjoe part), 12(Cudjoe part), 15**

"aSOI", "8w2", "This map unit consists of nearly level, very poorly drained soils of the tidal marshes."

"bSAC", "8w2", "The variety of plants growing on these soils is limited to those that are tolerant of extreme wetness and saline conditions."

"cH20", "8w2", "In normal years these soils have a seasonal high water table at the surface throughout the year. These soils are also subject to daily tidal flooding. Only rarely is the water table below the surface for an extended period."

"dCUL", "8w2", "Due to extreme wetness and salinity, these soils are not suited to cultivated crops."

"eERO", "8w2", "Due to the lack of these soils being cultivated, erosion control is not a management concern."

"fIRR", "8w2", "Due to the lack of cultivation, irrigation is not a normal practice on these soils."

"hPAS", "8w2", "Due to extreme wetness and salinity, these soils are not suited to hay and pasture."

"iWMG", "8w2", "Water table management is not a normal practice on these soils because of the lack of cultivation."

## **ECOLOGICAL COMMUNITIES**

kRNG - Rangeland

IWLD - Wildlife

mWOD - Woodland

### **South Florida Coastal Strand – Map Unit 16**

"kRNG", "02", "This South Florida Coastal Strand site has little or no range value and is not used for rangeland."

"IWLD", "02", "This South Florida Coastal Strand site is well suited to a variety of shorebirds, gulls, and terns. The native grasses and legumes are good food sources and nesting sites. The area is important as a nesting ground for sea turtles. It is suited to mammals such as mice, raccoons, bobcats, foxes, and skunks. Many songbirds also inhabit the area."

"mWOD", "02", "This South Florida Coastal Strand site is not generally used for commercial production of wood or timber."

### **Everglades Flatwoods – Map Unit 13**

"kRNG", "09", "This Everglades Flatwoods range site has the potential for producing usable amounts of high quality forage from bluestems and panicums. Sites in excellent condition produce 1500 to 3000 pounds per acre annually. Twelve to 33 acres or more are usually needed per animal unit. Little forage will be available if the tree canopy cover exceeds 60%. Forage is usually 75% grasses and grass-like plants, 15% trees and shrubs, and 10% herbaceous plants."

"IWLD", "09", "This Everglades Flatwoods site is well suited to deer, bobcat, owls, and small rodents. It is fairly suited to squirrels and well suited to many songbirds. Palm and palmetto fruit, pine mast, oak acorns, legume seed, and grasses are good sources of wildlife food. This site is also highly valuable as a habitat for migrating birds to and from South America. Many reptiles find suitable habitat in this community."

"mWOD", "09", "This Everglades Flatwoods site has a moderate potential for commercial production of wood and timber. The soils create moderate equipment limitations and severe seedling mortality rates. Commercial species suited to planting and their potential annual growth in cords are as follows: South Florida slash pine, 1.0 to 0.8. Slash pine, 0.8 to 0.6."



### **Tropical Hammocks - Map Units 2, 3, 12\*, 19**

"kRNG", "14", "This Tropical Hammock site has little or no range value."

"IWLD", "14", "This Tropical Hammock site is well suited to most local and migratory birds. Mink, squirrels, deer, mice, and rabbits utilize this site. It also serves as a source of cover for many mammals during periods of high water and resting and feeding areas for migratory birds."

"mWOD", "14", "This Tropical Hammock site has little or no value for the commercial production of wood and timber."

### **Mangrove Swamps – Map Units 4, 5, 6, 8, 9, 15, 17**

"kRNG", "19", "This mangrove swamp site has little or no range value."

"IWLD", "19", "This mangrove swamp site is well suited to mink, raccoons, alligators, and snakes. It serves as a roosting and breeding area for many birds including grackle, herons, gulls, hawks, pelicans, ibis, eagles, osprey and many other. Both local and migratory birds use the area."

"mWOD", "19", "This mangrove swamp site is unsuited to the commercial production of wood and timber."

### **Sawgrass Marsh – Map Unit 12\***

"kRNG", "24", "This Sawgrass Marsh site has little or no range value."

"IWLD", "24", "This Sawgrass Marsh site is well suited to alligators, snakes, blackbirds, ibis, herons, bitterns, egrets, and kites. Wading birds and many types of waterfowl especially like this habitat. Frogs, snails, and crayfish are also common and serve as food for larger animals."

"mWOD", "24", "This Sawgrass Marsh site is unsuited to the commercial production of wood and timber."

\* - These Map Units have more than one type of ecological community.

## **URBAN USES**

oURB - Urban Use Statement

pSEP – Septic Tank Absorption

qLRS – Local Roads and Streets

### **Map Units 16**

"oURB", "02", "Suitability is poor for most urban uses because of a seasonal high water table and bedrock within 40 inches of the soil surface, fine textured soil material near the soil surface. House or small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Landscape considerations should include use of species that are adapted to wetness, alkalinity, and fine textured soils."

"pSEP", "02", "This soil has severe limitations for septic tank absorption fields. High water table, bedrock, and fine textured soil material interfere with the absorption of effluent from septic tanks and creates a risk of contamination to adjacent surface waters and system failure. Absorption fields can be mounded or fine textured soil layers can be excavated and replaced with suitable soil material. Absorption field laterals should be installed downslope from dwellings."

"qLRS", "02", "This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

### **Map Units 2, 3**

"oURB", "05", "Suitability is poor for most urban uses because of a seasonal high water table and bedrock within 40 inches of the soil surface, fine textured soil material near the soil surface. House or small building pads can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. Landscape considerations should include use of species that are adapted to wetness, alkalinity, and fine textured soils."

"pSEP", "05", "This soil has severe limitations for septic tank absorption fields. High water table, bedrock, and fine textured soil material interfere with the absorption of effluent from septic tanks and creates a risk of contamination to adjacent surface waters and system failure. Absorption fields can be mounded or fine textured soil layers can be excavated and replaced with suitable soil material. Absorption field laterals should be installed downslope from dwellings."

"qLRS","05","This soil has severe limitations for local roads and streets. They can be elevated using suitable fill. The fill can be placed with a slight grade to allow water to drain away from the house or building. An engineer or soil scientist should be consulted to determine the shrink-swell potential of near surface soil material. Additional design precautions can be planned if shrink-swell is determined to be a concern."

### **Map Unit 7**

"oURB","15","This soil survey map unit is so variable that no general suitability for urban land use can be given. On-site investigation by a soil scientist and/or engineer is recommended for any urban land use."

"pSEP","15","This soil survey map unit is so variable that no general interpretations for the installation of any type on-site sewage disposal system can be given. On-site investigation by a soil scientist and/or engineer is recommended."

"qLRS","15","This soil survey map unit is so variable that no general interpretations for the construction of local roads and streets can be given. On-site investigation by a soil scientist and/or engineer is recommended."

### **Map Units 4, 5, 6, 8, 9, 12, 13, 15, 17, 18, 19**

"oURB","19","This soil is not suited to urban uses due to tidal flooding."

"pSEP","19","This soil is not suited to any on-site sewage disposal system due to wetness and tidal flooding."

"qLRS","19","This soil is not suited to local roads and streets due to wetness and tidal flooding."

### **Map Unit 11**

"oURB","20","These soils are mainly used for urban development."

"pSEP","20","These soils have no significant limitations for septic tank absorption fields."

"qLRS","20","These soils have no significant limitations for local roads and streets."

## **WATER QUALITY: PESTICIDE AND NUTRIENT MANAGEMENT**

sWQ – Water Quality Statement

tPES – Pesticide Management Statement

uNUT – Nutrient Management Statement

### **Map Units – 2, 3, 4, 5, 6, 7, 8, 9, 11, 12, 13, 15, 16, 17, 18, 19**

"sWQ", "03", "These soils have a medium or high potential for pesticide leaching to groundwater and a medium to high potential for pesticide runoff to surface water. They have a medium or high potential for nitrogen leaching to the groundwater and a medium or high potential for phosphorous runoff to surface runoff."

"tPES", "03", "The Florida Pest Control Guide from the Cooperative Extension Service contains a list of pesticides suited to each pest. This list also contains Relative Leaching Potential Index (RLPI) and Relative Runoff Potential Index (RRPI) values. While any approved pesticide listed in the guide can be used, the applicator should consider for use pesticides with a larger RLPI value, RRPI value, Health Advisory Level (HAL or HALEQ) value, and Aquatic Toxicity value. Read and follow pesticide labels."

"uNUT", "03", "A soil test will be used as a guide to determine plant nutrient needs. In addition, a listing of nitrogen and phosphorous requirements by crop type is available from the Cooperative Extension Service. Nutrients shall be added at the rate needed by the crop grown or according to the producer's goals, whichever is lower."